

ART IS IDEAS: ROOFTOP ART 2015

"THE HUMMINGBIRD EFFECT" WISH & CHIPS "STEAM" CHALLENGE

"THE HUMMINGBIRD EFFECT" is a phrase coined to describe how an innovation in one field can trigger unexpected breakthroughs in wholly different domains.

This inaugural STEAM Learning (Science, Technology, Engineering, Arts & Math) effort encourages students to innovate and explore the fascinating interchange between nature and technology.

For more information, visit <http://wp.me/P2u7jo-k1>



Good things come in small packages! (clockwise from left): A hummingbird rests on a ship at sea; Astronaut Yvonne Cagel & Blue Marble at "Space Night" and Dr. Sylvia Earle takes students on a "Deep Dive" at the Autodesk Gallery; Pringles chips.

OBJECTIVE:

Students are invited to design and test a package to safely ship a single Pringles Potato Chip through the US Postal Service to another school. Upon arrival, the chips will be evaluated on the following criteria and scored according to the process on this page.

GOAL:

Engineer your package so that your Pringles chip travels safely through the mail to arrive at Rooftop School undamaged. Use sustainable materials for your packaging solution and help to protect fish and birds from plastic pollution.

SCORING:

Intactness score of the chip as determined by ROOFTOP SCHOOL judges, according to the chart below

Perfectly Intact	Like it just left the factory	100 Points
Slightly Damaged	Cracked, but still in one piece	50 Points
Chipped Chip	Broken along the edges, but less than 5 pieces	10 Points
Split Chip	The chip is broken into two fairly equal pieces	10 Points
Significantly Damaged	Chipped and/or cracked into less than 20 pieces	5 Points
Pringle Dust	Too many pieces to count (more than 20)	1 Point
Super Sustainable	The packaging is biodegradable with no plastic	10-50 Bonus Points
Air & Sea Stamp of Approval	The packaging is decorated with a bird & fish theme	10-50 Bonus Points

Overall Score

The overall score of the package will be used to score the entries and determine the most successful challenge solutions.

Did you know? Hummingbirds migrate up to 600 miles across the Gulf, from Mexico's Yucatan Peninsula to the U.S. coast.



RULES:

adapted from THE PRINGLES CHALLENGE

(<https://sites.google.com/site/pringleschallenge/home>)

- ✱ Students will use 1 (regular) Pringles Potato Chip.
- ✱ No substance may be applied to the chip, or the chip altered in any way.
- ✱ The chip must be recoverable and edible when received by the school.
- ✱ Students will work individually or in small groups to design and test the package.
- ✱ No pre-made Pringles containers should be used (ex. specially designed Pringles containers for lunch boxes, Pringles cans, etc)
- ✱ All packages must be sent via the US Postal Service - First Class Mail. (please be aware there may be a surcharge for small packages if you stamp them yourself. It may be advisable to bring them to the post office for stamping!) Packages sent using any other carrier may be disqualified.
- ✱ Also be advised that there is a 3" x 5" limit on the size of the package, and a fussy postman may reject a smaller package. However in the past many, many packages smaller than 3" x 5" have been delivered, so getting a small package through the mail is part of the challenge).
- ✱ Package must be clearly labeled on the outside with the participant's first and last name, grade and return address. (If special unpacking instructions are needed they should also be included).
- ✱ Each participating school will send, receive and evaluate packages.
- ✱ Each package must be clearly labeled "Pringles Challenge" and addressed to ROOFTOP SCHOOL, attn: STEAM TEAM, 443 Burnett Avenue, San Francisco, CA 94131.
- ✱ The student MAY write only "Fragile" or "Handle With Care" on the package.
- ✱ THE ROOFTOP STEAM TEAM will assure that challenge results are accurate, and that they are exchanged in a timely manner.

Migrating across the Gulf of Mexico can be dangerous for tiny hummingbirds. This hummingbird landed on an oil rig about 200 miles south of Lake Charles, Louisiana, April 2. Rig worker Scott Lagasse found her cold and wet, and rescued her. "There is an opening on the rig deck and we found her clinging to the doors as they brought up the remote vehicle from under the deck. The little gal got drenched in cold salt water."

Photo: Scott Lagasse
Journey North
<http://www.learner.org/>

Rescued 200 miles offshore!



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We create as if lives depend on it. Billions do.

*We embrace the limits of our planet.
We can provide so much more while using so much less.*

*We take on the epic challenges of our day.
There is no more important brief and we have the tools to help us.*

*Unintended consequences are no longer beyond our control.
We see systems and how they impact each other.
We test and evolve before committing to any solution.*

*Cooperation has overtaken competition.
We create with everyone, leaving out no one.*

Together, we'll design a world in which 9 billion people live well and live within the limits of our planet.

This is the era of design where human intention, empowered by technology, is re-shaping everything.

<http://www.autodesk.com/sustainable-design/revolution/manifesto>

Special thanks to the AUTODESK for hosting our Rooftop STEAM evening.

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